

Future Concepts Team

FCT

Meeting Notes

February 24-26, 2015



CDM
Collaborative
Decision Making

Day 1: MITRE

JOINT SPACE OPERATIONS GROUP (JSpOG) QUARTERLY REVIEW

Tuesday morning the FCT attended the JSpOG Quarterly review and were presented with several presentations on new concepts and products hoping to enhance the commercial space operations. There were also presentations summarizing the discussions from recent commercial space conferences. **Some of the interesting outcomes from the presentations for the FCT included the fact that there are already 15 spaceports that have been approved for operations, several of which are located close to major airports.** These would accommodate numerous new entrants into the NAS including horizontal takeoff/landing, sub-orbital aircraft, high altitude balloons and unmanned aircraft. There is lots of work currently being done on integrating these into the NAS; however **FCT should try to assist in this process. The current method of developing an aircraft hazard area (AHA) for space launches/recovery is very much a manual, time consuming process and are mostly not repeatable and error prone. The objective is to develop a tool to automate this process.** Additionally, the communications with these operations are very point to point and the ATO lacks clear and timely information on the status of the hazard areas. This often results in airspace being blocked too long and aircraft being unnecessarily rerouted. The next quarterly meeting is scheduled for May 27th at MITRE.

The afternoon session began with a UAS briefing to the FCT by Paul Rumberger. The team learned about the classes of UAS, defined by weight and the different impacts to the NAS from each. FCT had discussion about the impact of these unmanned aircraft to the NAS and we felt that to fully integrate these into the system, regulations and requirements will need to be in place. The team felt that we could perhaps make recommendations to the CSG on some of these requirements; however they will be developed at a higher level within the FAA. We will continue to discuss the UAS impact at future meetings.

Day 2: MITRE

COMMERCIAL SPACE OPERATIONS

The FCT was briefed on commercial space operations by Rick Garceau, manager of the ATO Commercial Space office. This briefing showed the various types of vehicles and locations of the spaceports that are being developed for use. Of particular note were the sites at Ellington, TX and Front Range, CO which are **relatively close to the airports in Houston and Denver.** The briefing also showed the various types of launch and re-entry methods that are being developed. The team had many questions and quality discussion with the

JSpOG group and came out with the realization that integrating these flights into the NAS is a real challenge.

It was also revealed that at the last industry day, there was an invitation for all commercial space interests to become a part of CDM. The group felt that perhaps this should be formalized through the CSG and re-issued.

During the afternoon, FCT continued the discussion alone as the JSpOG group broke off for their own meeting. The FCT feels that we need further information on the objectives of the new entrants into the NAS and what their vision of the future holds. We also discussed what “equal access” really means and what the expectation is. It was suggested that the FCT read over the SVO ConOps document to answer some of these questions. We will continue to discuss this at future meetings and arrange for additional presentations on these topics.

Day 3: MITRE

AIRCRAFT ACCESS to SWIM (AAtS)

As part of CSG tasking, the FCT met with the AAtS group to discuss their operational scenarios being developed as part of their ConOps. AAtS has continued to modify these since last presented to the FCT and most of the scenarios are potentially realistic opportunities for AAtS use. The FCT members gave feedback as to validity of the scenarios and had discussion as to how this tool could be used. Concerns still exist from the FCT about the platform on which AAtS will be used and the cost of developing or purchasing such a product.

FCT industry expressed concern about providing data that could be gathered and sold by other parties for profit and interest in the possibility of selling this data for their own benefit. Several of the scenarios had situations where data could be eventually fed into other TFMS products that could enhance the system; however the quality and reliability of this data from non-CDM members was a concern.

Scheduled meeting dates for Spring 2015 are listed below.

- March 24-26, 2015 Orlando, FL CDM Spring meeting
- April 14-16, 2015 TBD

Appendix A – Meeting Attendance

Meeting Participants

Name	Organization	Email
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